

10/626,997

09/29/2008

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LOGINID:sssptal621con

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	12	JUN 25	CA/CAPplus and USPAT databases updated with IPC reclassification data
NEWS	13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS	15	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS	16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	17	JUL 28	CA/CAPplus patent coverage enhanced
NEWS	18	JUL 28	EPFULL enhanced with additional legal status information from the epline Register
NEWS	19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	20	JUL 28	STN Viewer performance improved
NEWS	21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	22	AUG 13	CA/CAPplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	24	AUG 15	CAPplus currency for Korean patents enhanced
NEWS	25	AUG 25	CA/CAPplus, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS	26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS	27	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS	28	SEP 25	CA/CAPplus current-awareness alert options enhanced

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to accommodate supplemental CAS indexing of  
exemplified prophetic substances  
NEWS 29 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and  
and Korean patents enhanced  
NEWS 30 SEP 29 IFICLS enhanced with new super search field  
NEWS 31 SEP 29 EMBASE and EMBAL enhanced with new search and  
display fields

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:48:36 ON 29 SEP 2008

=> FILE CASREACT

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'CASREACT' ENTERED AT 14:49:51 ON 29 SEP 2008  
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FILE CONTENT:1840 - 28 Sep 2008 VOL 149 ISS 14

New CAS Information Use Policies, enter HELP USAGETERMS for details.

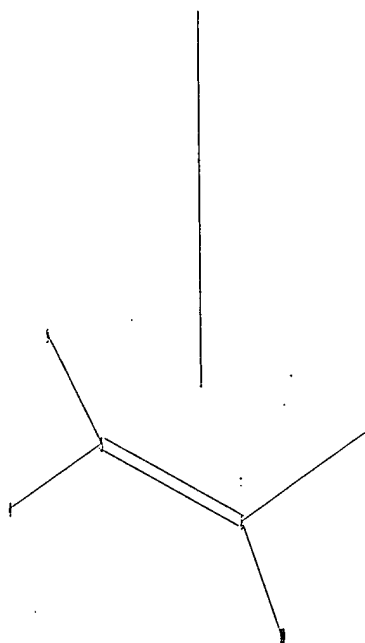
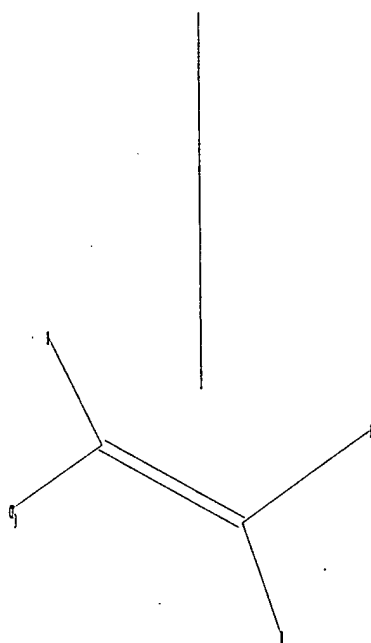
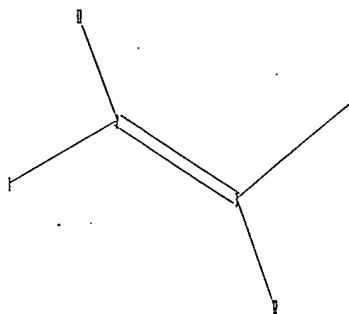
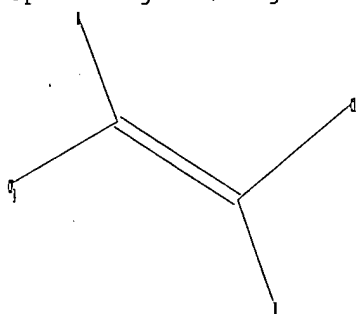
\*\*\*\*\*  
\* CASREACT now has more than 15.3 million reactions \*  
\* \*  
\*\*\*\*\*

CASREACT contains reactions from CAS and from: ZIC/VINITI database  
(1974-1999) provided by InfoChem; INPI data prior to 1986;  
Biotransformations database compiled under the direction of  
Professor Dr. Klaus Kieslich; organic reactions, portions copyright  
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This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

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chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 6-8 6-10

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 6-8 6-10

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS

fragments assigned product role:

containing 4

fragments assigned reactant/reagent role:

containing 1

L1 STRUCTURE UPLOADED

=&gt; S L1 FULL

FULL SEARCH INITIATED 14:50:20 FILE 'CASREACT'

SCREENING COMPLETE - 2455 REACTIONS TO VERIFY FROM 408 DOCUMENTS

100.0% DONE 2455 VERIFIED 8 HIT RXNS 6 DOCS  
 SEARCH TIME: 00.00.01

L2 6 SEA SSS FUL L1 ( 8 REACTIONS)

=&gt; D L2 IBIB ABS CRD 1-6

L2 ANSWER 1 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 148:33399 CASREACT

TITLE: Preparation of 1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-trifluoropropene

INVENTOR(S): Hibino, Yasuo; Tamai, Ryoichi; Sakyu, Fuyuhiko

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

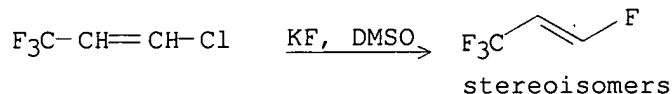
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007320896	A	20071213	JP 2006-152089	20060531
PRIORITY APPLN. INFO.:			JP 2006-152089	20060531

AB F3CCH:CHF is prepared by fluorination of F3CCH:CHCl with metal fluoride (in presence of a solvent). Thus, 26.1 g F3CCH:CHCl was autoclaved with Clocat F (KF) in DMSO at 150° and 0.9 MPa for 18 h to give 20.1 g products containing F3CCH:CHCl 16.3, trans-F3CCH:CHF 75.9, and cis-F3CCH:CHF 6.4%.

RX(1) OF 1



NOTE: alternative preparation shown, stereoselective, thermal  
 CON: 8 hours, 150 deg C, 0.9 MPa

L2 ANSWER 2 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 147:502007 CASREACT

TITLE: Preparation of 1,1,1,3,3-pentafluoropropane (HFC-245fa) by using a SbF5-attached catalyst

AUTHOR(S): Quan, Heng-Dao; Yang, Hui-E.; Tamura, Masanori; Sekiya, Akira

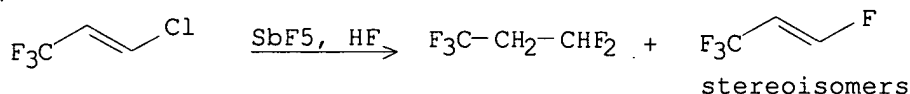
CORPORATE SOURCE: Tsukuba Central 5-2, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan

SOURCE: Journal of Fluorine Chemistry (2007), 128(3), 190-195  
 CODEN: JFLCAR; ISSN: 0022-1139

PUBLISHER: Elsevier B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The preparation of HFC-245fa by reaction of 1,1,1,3,3-pentachloropropane and anhydrous HF via two-step vapor-phase catalytic fluorination is described. The antimony pentafluoride catalyst was supported on inert porous materials to improve the catalytic activity. The resulting catalyst not only exhibited high catalytic activity and excellent thermal stability, but also improved the performance of SbF<sub>5</sub>, in terms of hygroscopicity and corrosion.

RX(2) OF 3



NOTE: gas phase, solid-supported catalyst, flow system used, optimization study, optimized on catalyst, catalyst support and reaction temperature, porous aluminium fluoride based catalyst at 350 deg C gave higher conversion but much lower selectivity on pentafluoro product, porous magnesium fluoride based catalyst support, tubular Inconel reactor used

CON: STAGE(1) 80 deg C -> 120 deg C; 1.81 seconds, 120 deg C

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 146:208362 CASREACT

TITLE: Fluorination catalysts, method for their preparation, and method for producing fluorinated compounds using the catalysts

INVENTOR(S): Quan, Heng-Dao; Yang, Huie; Tamura, Masanori; Sekiya, Akira

PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan

SOURCE: U.S. Pat. Appl. Publ., 10pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

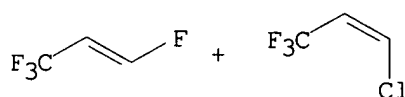
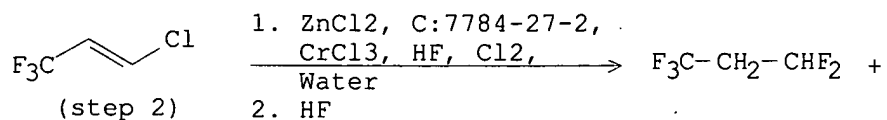
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070027348	A1	20070201	US 2006-456126	20060707
CN 1911512	A	20070214	CN 2006-10105441	20060705
JP 2007038216	A	20070215	JP 2006-187242	20060706
PRIORITY APPLN. INFO.:			JP 2005-199350	20050707

OTHER SOURCE(S): MARPAT 146:208362

AB The present invention provides a novel fluorination catalyst that has high stability at high temps., is easily regenerated and is superior in catalytic activity and selectivity and a method for the preparation of the fluorination catalyst. The present invention also provides a method for the preparation of a novel fluorinated compound, and particularly, 1,1,1,3,3-pentafluoropropane (HFC-245fa), by using the catalyst. The fluorination catalyst of the present invention is obtained by treating a

metal salt containing a chromium salt such as chromium oxide with chlorine gas and/or oxygen gas. Examples of the metal salt may include, besides a chromium salt, one or more catalytically active metal salts selected from magnesium salts, aluminum salts, zinc salts, sodium salts, nickel salts, iron salts, cobalt salts, vanadium salts, manganese salts and copper salts.

RX(1) OF 1



NOTE: Alternative preparations gave similar to lower conversions, gas phase, optimization study, thermal

CON: STAGE(1) room temperature; 4 hours, 400 deg C  
STAGE(2) 150 deg C

L2 ANSWER 4 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 143:442384 CASREACT

TITLE: Investigation into antimony pentafluoride-based catalyst in preparing organo-fluorine compounds

AUTHOR(S): Yang, Hui-e; Quan, Heng-dao; Tamura, Masanori; Sekiya, Akira

CORPORATE SOURCE: National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan

SOURCE: Journal of Molecular Catalysis A: Chemical (2005), 233(1-2), 99-104

CODEN: JMCCF2; ISSN: 1381-1169

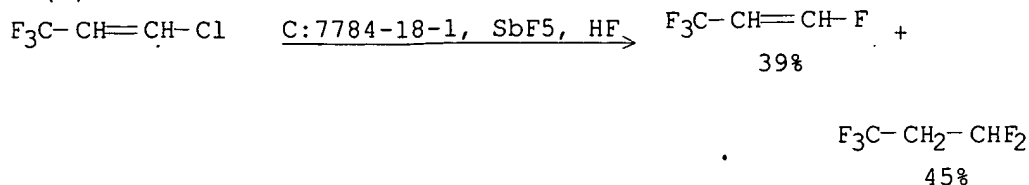
PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

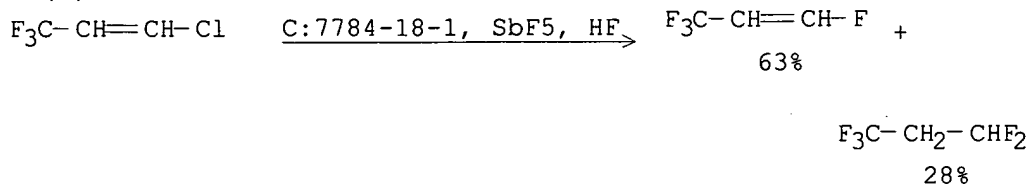
AB Antimony pentafluoride (SbF<sub>5</sub>)/porous metal fluorides (PMF) were prepared by impregnation of PMF with SbCl<sub>5</sub> followed by fluorination with anhydrous hydrogen fluoride (AHF). The PMFs include Al fluoride, Mg fluoride, Ca fluoride, and Cr fluoride, prepared from the corresponding oxides. The SbF<sub>5</sub>/PMF demonstrates excellent activity as catalyst in vapor-phase fluorination of hydrocarbons and overcomes such drawbacks as hygroscopicity, corrosion, and toxicity that appear when SbF<sub>5</sub> is used alone. The SbF<sub>5</sub>/PMF catalyst system was characterized by x-ray diffraction, XPS, BET surface area measurements, and SEM. The catalytic activity was evaluated in vapor-phased fixed-bed fluorination of chlorinated hydrocarbons.

RX(2) OF 6



NOTE: stereoselective, in the vapour-phase  
 CON: 1.7 seconds, 303 deg C

RX(3) OF 6



NOTE: stereoselective, in the vapour-phase  
 CON: 1.7 seconds, 350 deg C.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 142:158394 CASREACT

TITLE: Two-step process for the manufacture of  
 1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-trifluoropropene

INVENTOR(S): Tung, Hsueh Sung; Johnson, Robert C.; Merkel, Daniel C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

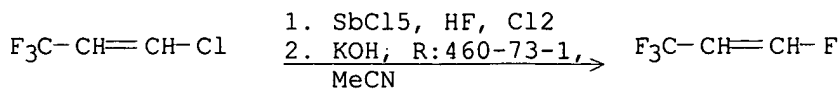
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050020862	A1	20050127	US 2003-626997	20030725
WO 2005012212	A2	20050210	WO 2004-US23160	20040721
WO 2005012212	A3	20050331		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,				

SN, TD, TG  
EP 1658252 A2 20060524 EP 2004-778595 20040721  
R: DE, ES, FR, GB, IT  
CN 1852880 A 20061025 CN 2004-80027096 20040721  
JP 2007500127 T 20070111 JP 2006-521162 20040721  
US 20070129579 A1 20070607 US 2006-588465 20061027  
CA 2608327 A1 20080427 CA 2007-2608327 20071026  
CA 2608675 A1 20080427 CA 2007-2608675 20071026  
EP 1916231 A2 20080430 EP 2007-119432 20071026  
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AL, BA, HR, MK, RS  
EP 1916232 A1 20080430 EP 2007-119443 20071026  
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WO 2008057794 A1 20080515 WO 2007-US82601 20071026  
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CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,  
KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,  
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,  
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
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BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,  
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM  
KR 2008038074 A 20080502 KR 2007-109198 20071029  
KR 2008038075 A 20080502 KR 2007-109199 20071029  
JP 2008110980 A 20080515 JP 2007-280802 20071029  
CN 101182280 A 20080521 CN 2007-10199937 20071029  
JP 2008162999 A 20080717 JP 2007-280719 20071029  
CN 101260021 A 20080910 CN 2007-10159615 20071029  
US 2003-626997 20030725  
US 2003-694272 20031027  
WO 2004-US23160 20040721  
US 2005-118503 20050429  
US 2005-733355P 20051103  
US 2006-763086P 20060127  
US 2006-588464 20061027  
US 2006-588465 20061027  
US 2006-588671 20061027  
PRIORITY APPLN. INFO.:

AB 1,3,3,3-Tetrafluoropropene is prepared by: (A) reacting 1-chloro-3,3,3-trifluoropropene with hydrogen fluoride in the vapor phase and in the presence of a fluorination catalyst and under conditions sufficient to form an intermediate product comprising 1-chloro-1,3,3,3-tetrafluoropropane and/or 1,1,1,3,3-pentafluoropropane; and (B) reacting the intermediate product with a caustic solution (e.g., aqueous NaOH) and under conditions sufficient to dehydrochlorinate 1-chloro-1,3,3,3-tetrafluoropropane and/or to dehydrofluorinate 1,1,1,3,3-pentafluoropropane, forming 1,3,3,3-tetrafluoropropene.



## RX(4) OF 5 - 2 STEPS

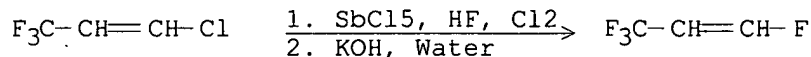


NOTE: 1) optimization study, other products also detected

CON: STEP(1) 12 seconds, 70 deg C, 45 psi

STEP(2) 60 deg C

## RX(5) OF 5 - 2 STEPS



NOTE: 1) optimization study, other products also detected

CON: STEP(1) 12 seconds, 70 deg C, 45 psi

STEP(2) room temperature

L2 ANSWER 6 OF 6 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 127:95018 CASREACT

TITLE: Process for producing 1,1,1,3,3-pentafluoropropane by fluorination of 1,1,1,3,3-pentachloropropane

INVENTOR(S): Nakada, Tatsuo; Aoyama, Hirokazu; Yamamoto, Akinori

PATENT ASSIGNEE(S): Daikin Industries Ltd., Japan

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9724307	A1	19970710	WO 1996-JP2942	19961008
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, KE, KG, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
JP 09183740	A	19970715	JP 1995-354118	19951229
JP 3818398	B2	20060906		
CA 2241131	A1	19970710	CA 1996-2241131	19961008
CA 2241131	C	20011204		
AU 9672275	A	19970728	AU 1996-72275	19961008
AU 704997	B2	19990513		
EP 877009	A1	19981111	EP 1996-933611	19961008
EP 877009	B1	20020403		
R: BE, DE, ES, FR, GB, IT, NL				
CN 1206394	A	19990127	CN 1996-199419	19961008
CN 1067043	C	20010613		
BR 9612297	A	19990713	BR 1996-12297	19961008
ES 2174108	T3	20021101	ES 1996-933611	19961008
CN 1224410	A	19990728	CN 1997-196154	19970321
US 6018084	A	20000125	US 1998-91820	19980625

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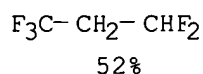
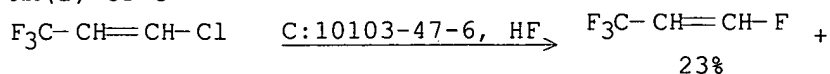
PRIORITY APPLN. INFO.:

JP 1995-354118 19951229

WO 1996-JP2942 19961008

AB Characterized is a process for producing 1,1,1,3,3-pentafluoropropane (I) using fluorination catalyst which involves (1) gas-phase reacting 1,1,1,3,3-pentachloropropane with HF to thereby give 1,1,1-trifluoro-3-chloro-2-propene (II); and (2) gas-phase reacting II with HF to thereby give I; wherein II obtained in the first step is fed into the second step after eliminating HCl formed as the byproduct therefrom. Thus, an economical and novel process for producing I, which is an useful as foaming and blowing agents, can be provided in a high yield with a good selectivity.

RX(2) OF 3



NOTE: 250.degree., reactant 4 and 5 at 20 and 200 cc/min feeding speed resp.

=&gt;

---Logging off of STN---

=&gt;

Executing the logoff script...

=&gt; LOG Y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

154.48

154.90

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-4.50

-4.50

STN INTERNATIONAL LOGOFF AT 14:50:59 ON 29 SEP 2008

10/626,997

09/29/2008

Part A

Step 1

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal62lcon

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	12	JUN 25	CA/CAPLUS and USPAT databases updated with IPC reclassification data
NEWS	13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
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NEWS	16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	17	JUL 28	CA/CAPLUS patent coverage enhanced
NEWS	18	JUL 28	EPFULL enhanced with additional legal status information from the EPOLINE Register
NEWS	19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	20	JUL 28	STN Viewer performance improved
NEWS	21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	22	AUG 13	CA/CAPLUS enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	24	AUG 15	CAPLUS currency for Korean patents enhanced
NEWS	25	AUG 25	CA/CAPLUS, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS	26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS	27	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS	28	SEP 25	CA/CAPLUS current-awareness alert options enhanced

10/626,997

09/29/2008

to accommodate supplemental CAS indexing of  
exemplified prophetic substances  
NEWS 29 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and  
and Korean patents enhanced  
NEWS 30 SEP 29 IFICLS enhanced with new super search field  
NEWS 31 SEP 29 EMBASE and EMBAL enhanced with new search and  
display fields

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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NEWS LOGIN Welcome Banner and News Items  
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=> FILE CASREACT

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE CONTENT:1840 - 28 Sep 2008 VOL 149 ISS 14

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\*\*\*\*\*  
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\* \*  
\*\*\*\*\*

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Biotransformations database compiled under the direction of  
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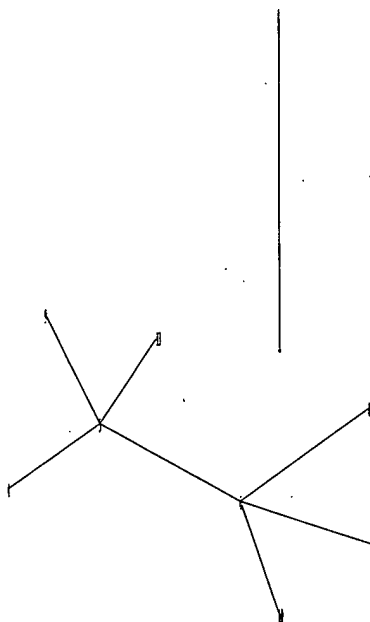
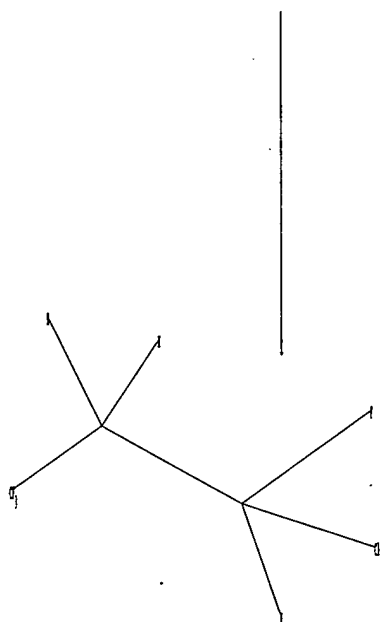
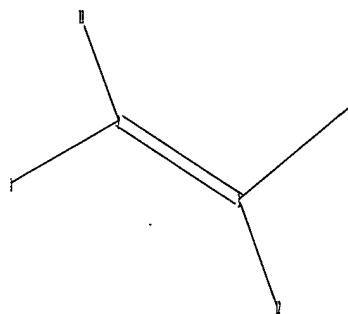
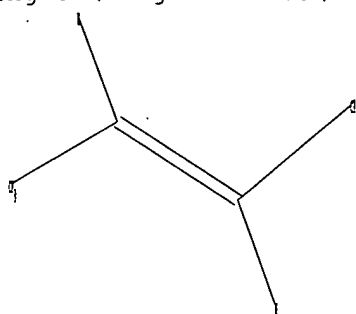
10/626,997

09/29/2008

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

Uploading C:\Program Files\Stnexp\Queries\RS-3.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS

fragments assigned product role:

containing 4

fragments assigned reactant/reagent role:

containing 1

10/626,997 09/29/2008

L1 STRUCTURE UPLOADED

=> S L1 FULL

FULL SEARCH INITIATED 15:09:10 FILE 'CASREACT'

SCREENING COMPLETE - 500 REACTIONS TO VERIFY FROM 149 DOCUMENTS

100.0% DONE 500 VERIFIED 2 HIT RXNS 2 DOCS

SEARCH TIME: 00.00.01

L2 2 SEA SSS FUL L1 ( 2 REACTIONS)

=> D L2 IBIB ABS CRD 1-2

L2 ANSWER 1 OF 2 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 142:158394 CASREACT

TITLE: Two-step process for the manufacture of  
1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-  
trifluoropropene

INVENTOR(S): Tung, Hsueh Sung; Johnson, Robert C.; Merkel, Daniel  
C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050020862	A1	20050127	US 2003-626997	20030725
WO 2005012212	A2	20050210	WO 2004-US23160	20040721
WO 2005012212	A3	20050331		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1658252	A2	20060524	EP 2004-778595	20040721
R:	DE, ES, FR, GB, IT			
CN 1852880	A	20061025	CN 2004-80027096	20040721
JP 2007500127	T	20070111	JP 2006-521162	20040721
US 20070129579	A1	20070607	US 2006-588465	20061027
CA 2608327	A1	20080427	CA 2007-2608327	20071026
CA 2608675	A1	20080427	CA 2007-2608675	20071026
EP 1916231	A2	20080430	EP 2007-119432	20071026
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS			
EP 1916232	A1	20080430	EP 2007-119443	20071026
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WO 2008057794 A1 20080515 WO 2007-US82601 20071026

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

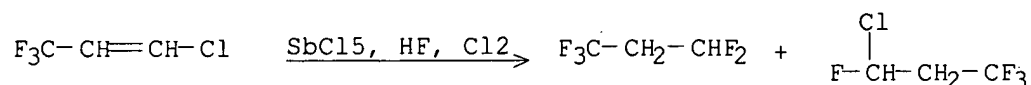
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JP 2008110980	A	20080515	JP 2007-280802	20071029
CN 101182280	A	20080521	CN 2007-10199937	20071029
JP 2008162999	A	20080717	JP 2007-280719	20071029
CN 101260021	A	20080910	CN 2007-10159615	20071029

PRIORITY APPLN. INFO.:

US 2003-626997	20030725
US 2003-694272	20031027
WO 2004-US23160	20040721
US 2005-118503	20050429
US 2005-733355P	20051103
US 2006-763086P	20060127
US 2006-588464	20061027
US 2006-588465	20061027
US 2006-588671	20061027

AB 1,3,3,3-Tetrafluoropropene is prepared by: (A) reacting 1-chloro-3,3,3-trifluoropropene with hydrogen fluoride in the vapor phase and in the presence of a fluorination catalyst and under conditions sufficient to form an intermediate product comprising 1-chloro-1,3,3,3-tetrafluoropropane and/or 1,1,1,3,3-pentafluoropropane; and (B) reacting the intermediate product with a caustic solution (e.g., aqueous NaOH) and under conditions sufficient to dehydrochlorinate 1-chloro-1,3,3,3-tetrafluoropropane and/or to dehydrofluorinate 1,1,1,3,3-pentafluoropropane, forming 1,3,3,3-tetrafluoropropene.

RX(1) OF 5



NOTE: optimization study, other products also detected

CON: 12 seconds, 70 deg C, 45 psi

L2 ANSWER 2 OF 2 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 128:217103 CASREACT

TITLE: Preparation of 1,1,1,3,3-pentafluoropropane from 1-chloro-3,3,3-trifluoropropene

INVENTOR(S): Sakyu, Fuyuhiko; Yoshikawa, Satoshi; Hibino, Yasuo

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

10/626,997

09/29/2008

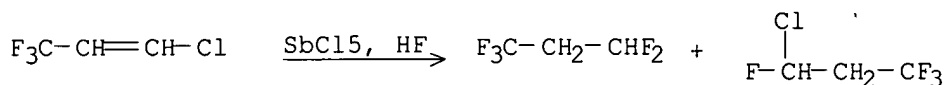
## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10072381	A	19980317	JP 1996-226638	19960828
JP 3164288	B2	20010508		
US 6235951	B1	20010522	US 1996-752879	19961120
			JP 1996-5971	19960117
			JP 1996-222004	19960823
			JP 1996-226638	19960828

PRIORITY APPLN. INFO.:

AB 1,1,1,3,3-Pentafluoropropane (I), useful as blowing agents or refrigerants (no data), is prepared by catalytic addition reaction of HF to 1-chloro-3,3,3-trifluoropropene (II) and catalytic disproportionation of the resulting 1,1,1,3-tetrafluoro-3-chloropropane (III). II (64.1 g) was treated with HF in the presence of SbCl<sub>5</sub> at 80° under 6 kg/cm<sup>2</sup>G for 3 h to give 37.2 g product containing 57.9% I and 10.7% III.

RX(1) OF 1



=&gt;

---Logging off of STN---

=&gt;

Executing the logoff script...

=&gt; LOG Y

COST IN U.S. DOLLARS

SINCE FILE  
ENTRYTOTAL  
SESSION  
130.65

FULL ESTIMATED COST

130.44

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE  
ENTRYTOTAL  
SESSION

CA SUBSCRIBER PRICE

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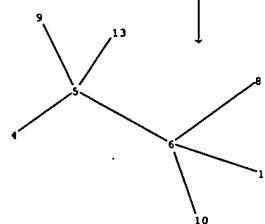
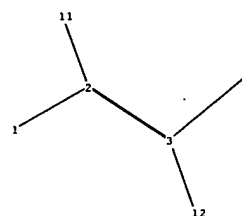
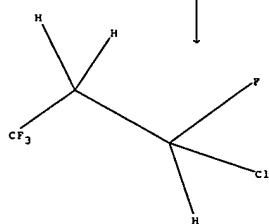
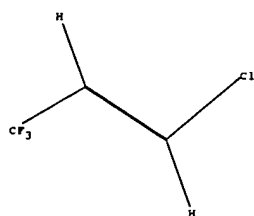
-1.50

STN INTERNATIONAL LOGOFF AT 15:09:48 ON 29 SEP 2008



Part A:

Step 1



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS

9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS

fragments assigned product role:

containing 4

fragments assigned reactant/reagent role:

containing 1

10/626,997

09/29/2008

Part A  
Step 2

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal621con

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
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and Korean patents enhanced

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=> FILE CASREACT

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

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FILE CONTENT:1840 - 28 Sep 2008 VOL 149 ISS 14

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\*  
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\*  
\*\*\*\*\*

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Biotransformations database compiled under the direction of  
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This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

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L1 STRUCTURE UPLOADED

=> S L1 FULL

FULL SEARCH INITIATED 15:16:32 FILE 'CASREACT'

SCREENING COMPLETE - 631 REACTIONS TO VERIFY FROM 148 DOCUMENTS

100.0% DONE 631 VERIFIED 3 HIT RXNS 2 DOCS  
SEARCH TIME: 00.00.01

L2 2 SEA SSS FUL L1 ( 3 REACTIONS)

=> D L2 IBIB ABS CRD 1-2

L2 ANSWER 1 OF 2 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 147:52627 CASREACT

TITLE: Catalytic dehydrohalogenation method for producing  
fluoroalkenes from fluorohaloalkanes

INVENTOR(S): Mukhopadhyay, Sudip; Nair, Haridasan K.; Tung, Hsueh  
S.; Van Der Puy, Michael; Singh, Rajiv R.; Wang,  
Haiyou; Johnson, Robert C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 7pp., Cont.-in-part of U.S.  
Ser. No. 118,503.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070129580	A1	20070607	US 2006-592442	20061103
US 20050245773	A1	20051103	US 2005-118503	20050429
US 7345209	B2	20080318		
US 20050245774	A1	20051103	US 2005-118504	20050429
US 7371904	B2	20080513		
CA 2564897	A1	20051117	CA 2005-2564897	20050429
CA 2564903	A1	20051117	CA 2005-2564903	20050429
US 20060030744	A1	20060209	US 2005-118530	20050429
US 7189884	B2	20070313		
EP 1740518	A1	20070110	EP 2005-740929	20050429
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EP 1740521	A1	20070110	EP 2005-744032	20050429
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CN 1972887	A	20070530	CN 2005-80020412	20050429
JP 2007535561	T	20071206	JP 2007-511040	20050429
JP 2007535570	T	20071206	JP 2007-511080	20050429

MX 2006PA12467	A	20070129	MX 2006-PA12467	20061027
MX 2006PA12468	A	20070129	MX 2006-PA12468	20061027
US 20070179324	A1	20070802	US 2006-588464	20061027
KR 2007005737	A	20070110	KR 2006-725179	20061129
KR 2007011554	A	20070124	KR 2006-725180	20061129
CA 2608327	A1	20080427	CA 2007-2608327	20071026
CA 2608675	A1	20080427	CA 2007-2608675	20071026
EP 1916231	A2	20080430	EP 2007-119432	20071026
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EP 1916232	A1	20080430	EP 2007-119443	20071026
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WO 2008057794	A1	20080515	WO 2007-US82601	20071026
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2008038074	A	20080502	KR 2007-109198	20071029
KR 2008038075	A	20080502	KR 2007-109199	20071029
JP 2008110980	A	20080515	JP 2007-280802	20071029
CN 101182280	A	20080521	CN 2007-10199937	20071029
JP 2008162999	A	20080717	JP 2007-280719	20071029
CN 101260021	A	20080910	CN 2007-10159615	20071029

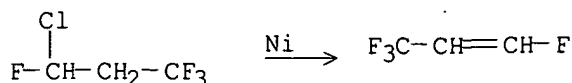
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US 2004-567425P	20040429
US 2004-567426P	20040429
US 2004-567427P	20040429
US 2004-567428P	20040429
US 2004-567429P	20040429
US 2005-118503	20050429
US 2005-118504	20050429
US 2005-118530	20050429
US 2005-733377P	20051103
US 2006-763086P	20060127
WO 2005-US14950	20050429
WO 2005-US15124	20050429
US 2005-733355P	20051103
US 2006-588464	20061027
US 2006-588465	20061027
US 2006-588671	20061027

OTHER SOURCE(S): MARPAT 147:52627

AB A dehydrohalogenation (e.g., dehydrofluorination) method for producing fluoroalkenes (e.g., cis- and trans-1,3,3,3-tetrafluoropropylene) from fluorohaloalkanes (e.g., 1,1,1,3,3-pentafluoropropane) in the presence of a Ni catalyst (e.g., Ni/C) is described.

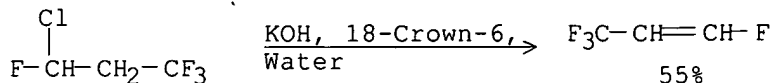
RX(3) OF 4



NOTE: Optimized on catalyst, time and temperature, gas phase,  
optimization study, thermal

CON: 15 hours, 515 deg C

RX(4) OF 4



CON: 6 hours, 50 deg C

L2 ANSWER 2 OF 2 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 142:158394 CASREACT

TITLE: Two-step process for the manufacture of  
1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-  
trifluoropropene

INVENTOR(S): Tung, Hsueh Sung; Johnson, Robert C.; Merkel, Daniel  
C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050020862	A1	20050127	US 2003-626997	20030725
WO 2005012212	A2	20050210	WO 2004-US23160	20040721
WO 2005012212	A3	20050331		
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1658252	A2	20060524	EP 2004-778595	20040721
R: DE, ES, FR, GB, IT				
CN 1852880	A	20061025	CN 2004-80027096	20040721
JP 2007500127	T	20070111	JP 2006-521162	20040721
US 20070129579	A1	20070607	US 2006-588465	20061027
CA 2608327	A1	20080427	CA 2007-2608327	20071026
CA 2608675	A1	20080427	CA 2007-2608675	20071026
EP 1916231	A2	20080430	EP 2007-119432	20071026

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EP 1916232 A1 20080430 EP 2007-119443 20071026

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WO 2008057794 A1 20080515 WO 2007-US82601 20071026

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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

KR 2008038074 A 20080502 KR 2007-109198 20071029

KR 2008038075 A 20080502 KR 2007-109199 20071029

JP 2008110980 A 20080515 JP 2007-280802 20071029

CN 101182280 A 20080521 CN 2007-10199937 20071029

JP 2008162999 A 20080717 JP 2007-280719 20071029

CN 101260021 A 20080910 CN 2007-10159615 20071029

PRIORITY APPLN. INFO.:

US 2003-626997 20030725

US 2003-694272 20031027

WO 2004-US23160 20040721

US 2005-118503 20050429

US 2005-733355P 20051103

US 2006-763086P 20060127

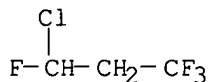
US 2006-588464 20061027

US 2006-588465 20061027

US 2006-588671 20061027

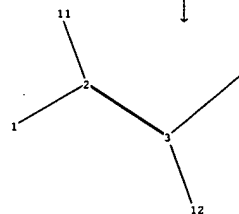
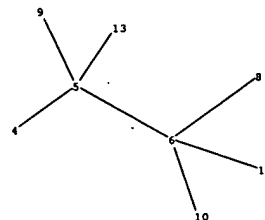
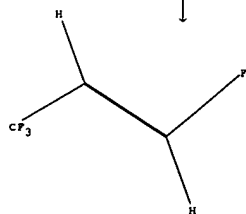
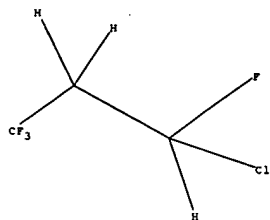
AB 1,3,3,3-Tetrafluoropropene is prepared by: (A) reacting 1-chloro-3,3,3-trifluoropropene with hydrogen fluoride in the vapor phase and in the presence of a fluorination catalyst and under conditions sufficient to form an intermediate product comprising 1-chloro-1,3,3,3-tetrafluoropropane and/or 1,1,1,3,3-pentafluoropropane; and (B) reacting the intermediate product with a caustic solution (e.g., aqueous NaOH) and under conditions sufficient to dehydrochlorinate 1-chloro-1,3,3,3-tetrafluoropropane and/or to dehydrofluorinate 1,1,1,3,3-pentafluoropropane, forming 1,3,3,3-tetrafluoropropene.

RX(3) OF 5



CON: 60 deg C

Part A  
Step 2.



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS

9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS

fragments assigned product role:

containing 1

fragments assigned reactant/reagent role:

containing 4



Part B

10/626,997

09/29/2008

step 2.

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal621con

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	12	JUN 25	CA/CAPLUS and USPAT databases updated with IPC reclassification data
NEWS	13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS	15	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS	16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	17	JUL 28	CA/CAPLUS patent coverage enhanced
NEWS	18	JUL 28	EPFULL enhanced with additional legal status information from the EPOLINE Register
NEWS	19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	20	JUL 28	STN Viewer performance improved
NEWS	21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	22	AUG 13	CA/CAPLUS enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	24	AUG 15	CAPLUS currency for Korean patents enhanced
NEWS	25	AUG 25	CA/CAPLUS, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS	26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS	27	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS	28	SEP 25	CA/CAPLUS current-awareness alert options enhanced

10/626,997

09/29/2008

to accommodate supplemental CAS indexing of  
exemplified prophetic substances  
NEWS 29 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and  
and Korean patents enhanced  
NEWS 30 SEP 29 IFICLS enhanced with new super search field  
NEWS 31 SEP 29 EMBASE and EMBAL enhanced with new search and  
display fields

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

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=> FILE CASREACT

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE CONTENT:1840 - 28 Sep 2008 VOL 149 ISS 14

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\* CASREACT now has more than 15.3 million reactions \*  
\* \*\*\*\*\*

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Biotransformations database compiled under the direction of  
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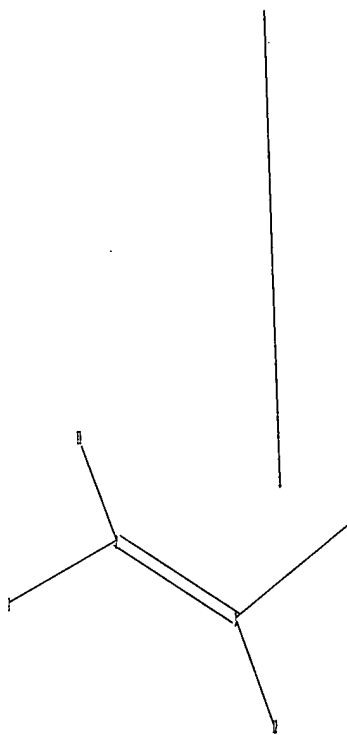
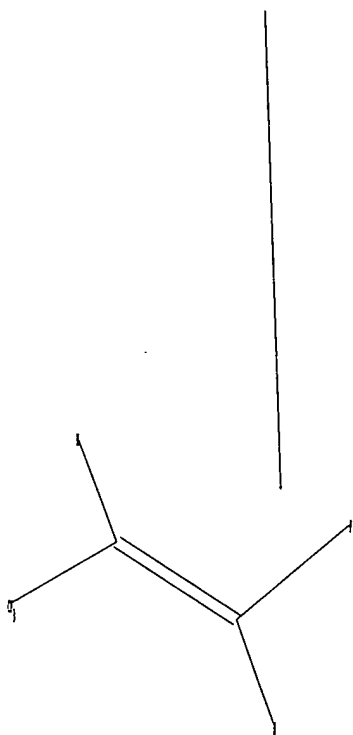
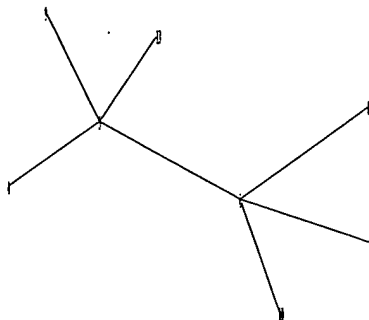
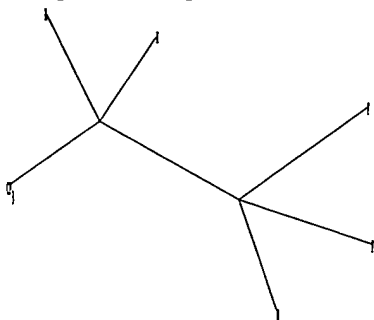
10/626,997

09/29/2008

This file contains CAS Registry Numbers for easy and accurate substance identification.

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chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS

fragments assigned product role:

containing 1

fragments assigned reactant/reagent role:

containing 4

L1 STRUCTURE UPLOADED

=&gt; S L1 FULL

FULL SEARCH INITIATED 17:28:31 FILE 'CASREACT'

SCREENING COMPLETE - 3964 REACTIONS TO VERIFY FROM 686 DOCUMENTS

100.0% DONE 3964 VERIFIED 10 HIT RXNS 7 DOCS  
SEARCH TIME: 00.00.01

L2 7 SEA SSS FUL L1 ( 10 REACTIONS)

=&gt; D L2 IBIB ABS CRD 1-7

L2 ANSWER 1 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 148:519340 CASREACT

TITLE: Geometric isomerization of halogenated olefins

INVENTOR(S): Wang, Haiyou; Tung, Hsueh Sung

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

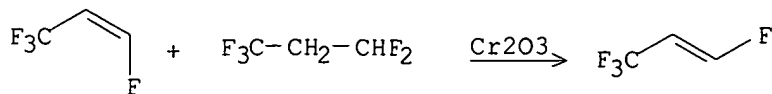
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080103342	A1	20080501	US 2006-588466	20061027
EP 1918269	A1	20080507	EP 2007-119344	20071025
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				
CA 2608611	A1	20080427	CA 2007-2608611	20071026
CN 101177378	A	20080514	CN 2007-10199957	20071026
KR 2008038073	A	20080502	KR 2007-109197	20071029
JP 2008110979	A	20080515	JP 2007-280360	20071029
PRIORITY APPLN. INFO.:			US 2006-588466	20061027

AB A process for the conversion of cis-1,3,3,3 tetrafluoropropene to trans-1,3,3,3 tetrafluoropropene comprises the steps, (a) providing a reactor feed comprising cis-1,3,3,3 tetrafluoropropene; and (b) introducing said reactor feed to catalytic reaction conditions effective to convert at least a portion of said cis-1,3,3,3 tetrafluoropropene in said feed to trans-1,3,3,3, said conditions comprising exposing said feed to a metal based catalyst selected from the group consisting of halogenated metal oxides, Lewis acid metal halides, zero-valent metals, and combinations of these. A mixture of 85.3% cis-1234ze and 14.7% HFC-245fa is passed over a catalyst fluorinated Cr2O3 catalyst (20 mL) at a rate of 12 g/h at 100° showing a cis-1234ze conversion of 91% and a trans-1234ze selectivity of 100% were obtained.

RX(1) OF 1



NOTE: Optimized on temperature, gas phase, optimization study  
 CON: 100 deg C

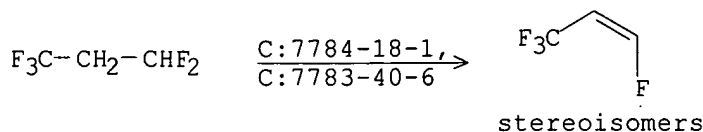
L2 ANSWER 2 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 148:287184 CASREACT  
 TITLE: Production of hfo trans-1234ze from hfc-245fa  
 INVENTOR(S): Wang, Haiyou; Tung, Hsueh Sung  
 PATENT ASSIGNEE(S): Honeywell International Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 8pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080051611	A1	20080228	US 2007-775318	20070710
CA 2598386	A1	20080224	CA 2007-2598386	20070823
CN 101265155	A	20080917	CN 2007-10185757	20070823
KR 2008018851	A	20080228	KR 2007-85689	20070824
JP 2008150356	A	20080703	JP 2007-218239	20070824
PRIORITY APPLN. INFO.:			US 2006-839873P	20060824
			US 2007-775318	20070710

AB The manufacture of the HFO trans-1,3,3,3-tetrafluoropropene (HFO trans-1234ze) is shown. More particularly, a process for the manufacture of the HFO trans-1234ze occurs by first dehydrofluorinating 1,1,1,3,3-pentafluoropropane to produce a mixture of cis-1,3,3,3-tetrafluoropropene, trans-1,3,3,3-tetrafluoropropene, and HF. Then optionally recovering HF and then recovering trans-1,3,3,3-tetrafluoropropene.

RX(1) OF 1



NOTE: Optimized on catalyst, gas phase, optimization study,  
 stereoselective, thermal  
 CON: 350 deg C

L2 ANSWER 3 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 148:287183 CASREACT  
 TITLE: Integrated HFC trans-1234ze manufacture process  
 INVENTOR(S): Wang, Haiyou; Tung, Hsueh Sung; Chiu, Yuon; Cerri, Gustavo; Cottrell, Stephen A.  
 PATENT ASSIGNEE(S): Honeywell International Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 7pp.

10/626,997

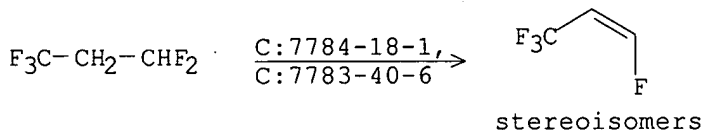
09/29/2008

CODEN: USXXCO  
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 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
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CA 2598382	A1	20080224	CA 2007-2598382	20070823
EP 1900716	A1	20080319	EP 2007-253337	20070823
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JP 2008069147	A	20080327	JP 2007-216914	20070823
KR 2008018847	A	20080228	KR 2007-85594	20070824
PRIORITY APPLN. INFO.:				
			US 2006-839874P	20060824
			US 2007-657354	20070124

AB An integrated process for the manufacture of HFO trans-1,3,3,3-tetrafluoropropene (HFO trans-1234ze) by first catalytically dehydrofluorinating 1,1,1,3,3-pentafluoropropane to produce a mixture of cis-1,3,3,3-tetrafluoropropene, trans-1,3,3,3-tetrafluoropropene, and HF. Then optionally recovering HF, catalytically isomerizing cis-1234ze into trans-1234ze, and recovering trans-1,3,3,3-tetrafluoropropene.

RX(1) OF 1



NOTE: Optimized on catalyst and temperature, Cis product was isomerized to the trans product, gas phase, optimization study, stereoselective  
 CON: 350 deg C

L2 ANSWER 4 OF 7 CASREACT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 148:54624 CASREACT  
 TITLE: Method for producing 1,3,3,3-tetrafluoropropene by dehydrofluorination of 1,1,1,3,3-pentafluoropropane  
 INVENTOR(S): Sakyu, Fuyuhiko; Hibino, Yasuo  
 PATENT ASSIGNEE(S): Central Glass Company, Limited, Japan  
 SOURCE: PCT Int. Appl., 16pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

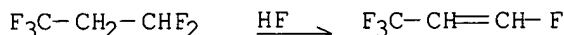
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007145171	A1	20071221	WO 2007-JP61741	20070611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,				

RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,  
 GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM

JP 2008019243 A 20080131 JP 2007-146981 20070601  
 PRIORITY APPLN. INFO.: JP 2006-163485 20060613

AB Disclosed is a process for the preparation of 1,3,3,3-tetrafluoropropene, characterized by dehydrofluorination of 1,1,1,3,3-pentafluoropropane in the presence of a zirconium compound, which is supported on a metal oxide or an activated carbon. For example, a zirconium catalyst (40 mL) was purged with N<sub>2</sub> in a rate of 200 mL/min while heating to 300°, and then hydrogen fluoride was supplied in a rate of 0.2 g/min for 1 h. To the resulting mixture was added gaseous 1,1,1,3,3-pentafluoropropane in a rate of 0.15 g/min for 1 h. The obtained gas was analyzed by GC to show the composition of 1,1,1,3,3-pentafluoropropane (5.88%), 1,3,3,3-tetrafluoropropene (trans (75.48%) and cis (17.70%)) and 3,3,3-trifluoropropyne (0.47%) (94.02% conversion rate and 99.11% selectivity). Wherein, the zirconium catalyst was prepd by (1) treatment of ZrOCl<sub>2</sub>·8H<sub>2</sub>O (4.5 g) in ethanol with alumina (50 mL) overnight followed by removal of solvent and drying under reduced pressure at 150° (2) exposure of residue (zirconium compound supported on alumina) to N<sub>2</sub> containing hydrogen fluoride at 200° and heating at 450° for 1 h.

RX(1) OF 1



NOTE: alternative preparation shown, Zr used as a catalyst, thermal  
 CON: 1 hour, 300 deg C

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 147:52627 CASREACT

TITLE: Catalytic dehydrohalogenation method for producing  
 fluoroalkenes from fluorohaloalkanes

INVENTOR(S): Mukhopadhyay, Sudip; Nair, Haridasan K.; Tung, Hsueh  
 S.; Van Der Puy, Michael; Singh, Rajiv R.; Wang,  
 Haiyou; Johnson, Robert C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 7pp., Cont.-in-part of U.S.  
 Ser. No. 118,503.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070129580	A1	20070607	US 2006-592442	20061103
US 20050245773	A1	20051103	US 2005-118503	20050429
US 7345209	B2	20080318		
US 20050245774	A1	20051103	US 2005-118504	20050429

US 7371904	B2	20080513		
CA 2564897	A1	20051117	CA 2005-2564897	20050429
CA 2564903	A1	20051117	CA 2005-2564903	20050429
US 20060030744	A1	20060209	US 2005-118530	20050429
US 7189884	B2	20070313		
EP 1740518	A1	20070110	EP 2005-740929	20050429
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
EP 1740521	A1	20070110	EP 2005-744032	20050429
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CN 1968915	A	20070523	CN 2005-80020225	20050429
CN 1972887	A	20070530	CN 2005-80020412	20050429
JP 2007535561	T	20071206	JP 2007-511040	20050429
JP 2007535570	T	20071206	JP 2007-511080	20050429
MX 2006PA12467	A	20070129	MX 2006-PA12467	20061027
MX 2006PA12468	A	20070129	MX 2006-PA12468	20061027
US 20070179324	A1	20070802	US 2006-588464	20061027
KR 2007005737	A	20070110	KR 2006-725179	20061129
KR 2007011554	A	20070124	KR 2006-725180	20061129
CA 2608327	A1	20080427	CA 2007-2608327	20071026
CA 2608675	A1	20080427	CA 2007-2608675	20071026
EP 1916231	A2	20080430	EP 2007-119432	20071026
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				
EP 1916232	A1	20080430	EP 2007-119443	20071026
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WO 2008057794	A1	20080515	WO 2007-US82601	20071026
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2008038074	A	20080502	KR 2007-109198	20071029
KR 2008038075	A	20080502	KR 2007-109199	20071029
JP 2008110980	A	20080515	JP 2007-280802	20071029
CN 101182280	A	20080521	CN 2007-10199937	20071029
JP 2008162999	A	20080717	JP 2007-280719	20071029
CN 101260021	A	20080910	CN 2007-10159615	20071029
PRIORITY APPLN. INFO.:				
			US 2004-567425P	20040429
			US 2004-567426P	20040429
			US 2004-567427P	20040429
			US 2004-567428P	20040429
			US 2004-567429P	20040429
			US 2005-118503	20050429
			US 2005-118504	20050429
			US 2005-118530	20050429
			US 2005-733377P	20051103
			US 2006-763086P	20060127
			WO 2005-US14950	20050429

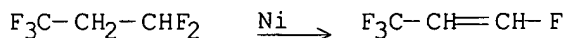


WO 2005-US15124 20050429  
 US 2005-733355P 20051103  
 US 2006-588464 20061027  
 US 2006-588465 20061027  
 US 2006-588671 20061027

OTHER SOURCE(S): MARPAT 147:52627

AB A dehydrohalogenation (e.g., dehydrofluorination) method for producing fluoroalkenes (e.g., cis- and trans-1,3,3,3-tetrafluoropropylene) from fluorohaloalkanes (e.g., 1,1,1,3,3-pentafluoropropane) in the presence of a Ni catalyst (e.g., Ni/C) is described.

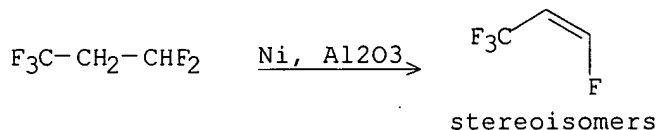
RX(1) OF 4



NOTE: Optimized on catalyst, time and temperature, gas phase, optimization study, thermal

CON: 15 hours, 515 deg C

RX(2) OF 4



NOTE: gas phase, thermal  
 CON: 15 hours, 515 deg C

L2 ANSWER 6 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 144:490632 CASREACT

TITLE: Processes for production and purification of hydrofluoroolefins

INVENTOR(S): Miller, Ralph Newton; Nappa, Mario Joseph; Rao, Velliur Nott Mallikarjuna; Sievert, Allen Capron

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 259,901.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060106263	A1	20060518	US 2005-264183	20051101
US 20060094911	A1	20060504	US 2005-259901	20051027
EP 1805124	A2	20070711	EP 2005-819557	20051028
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
JP 2008518938	T	20080605	JP 2007-539220	20051028
WO 2007053178	A1	20070510	WO 2006-US13361	20060411
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,				

KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
 SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
 VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM

EP 1960336 A1 20080827 EP 2006-740830 20060411

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

CN 101133008 A 20080227 CN 2005-80037557 20070429

IN 2008DN03345 A 20080704 IN 2008-DN3345 20080423

KR 2008066844 A 20080716 KR 2008-713217 20080530

PRIORITY APPLN. INFO.:

US 2004-623210P 20041029

US 2005-259901 20051027

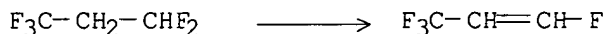
WO 2005-US39169 20051028

US 2005-264183 20051101

WO 2006-US13361 20060411

AB Hydrofluoroolefins are produced by dehydrofluorination of  
 hydrofluorocarbons containing  $\geq 1$  H and  $\geq 1$  F on adjacent carbons,  
 with the product mixture containing  $\geq 1$  of the hydrofluoroolefin and  
 unreacted hydrofluorocarbon as an azeotrope with HF. The product mixts.  
 are separated by distilling off the azeotropic or near-azeotropic mixture  
 containing HF  
 and hydrofluoroolefins and distilling this mixture in 2 steps at different  
 pressures to sep. the components.

RX(1) OF 8



NOTE: flow system, porous carbonaceous material was used as catalyst,  
 tube reactor was used, gas phase, optimization study, thermal  
 CON: 350 deg C

L2 ANSWER 7 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 142:158394 CASREACT

TITLE: Two-step process for the manufacture of  
 1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-  
 trifluoropropene

INVENTOR(S): Tung, Hsueh Sung; Johnson, Robert C.; Merkel, Daniel  
 C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 26

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050020862	A1	20050127	US 2003-626997	20030725
WO 2005012212	A2	20050210	WO 2004-US23160	20040721
WO 2005012212	A3	20050331		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
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EP 1658252 A2 20060524 EP 2004-778595 20040721  
 R: DE, ES, FR, GB, IT  
 CN 1852880 A 20061025 CN 2004-80027096 20040721  
 JP 2007500127 T 20070111 JP 2006-521162 20040721  
 US 20070129579 A1 20070607 US 2006-588465 20061027  
 CA 2608327 A1 20080427 CA 2007-2608327 20071026  
 CA 2608675 A1 20080427 CA 2007-2608675 20071026  
 EP 1916231 A2 20080430 EP 2007-119432 20071026  
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 EP 1916232 A1 20080430 EP 2007-119443 20071026  
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS  
 WO 2008057794 A1 20080515 WO 2007-US82601 20071026  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
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 KR 2008038074 A 20080502 KR 2007-109198 20071029  
 KR 2008038075 A 20080502 KR 2007-109199 20071029  
 JP 2008110980 A 20080515 JP 2007-280802 20071029  
 CN 101182280 A 20080521 CN 2007-10199937 20071029  
 JP 2008162999 A 20080717 JP 2007-280719 20071029  
 CN 101260021 A 20080910 CN 2007-10159615 20071029

## PRIORITY APPLN. INFO.:

US 2003-626997 20030725  
 US 2003-694272 20031027  
 WO 2004-US23160 20040721  
 US 2005-118503 20050429  
 US 2005-733355P 20051103  
 US 2006-763086P 20060127  
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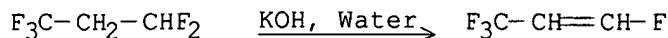
AB 1,3,3,3-Tetrafluoropropene is prepared by: (A) reacting 1-chloro-3,3,3-trifluoropropene with hydrogen fluoride in the vapor phase and in the presence of a fluorination catalyst and under conditions sufficient to form an intermediate product comprising 1-chloro-1,3,3,3-tetrafluoropropane and/or 1,1,1,3,3-pentafluoropropane; and (B) reacting the intermediate product with a caustic solution (e.g., aqueous NaOH) and under

10/626,997

09/29/2008

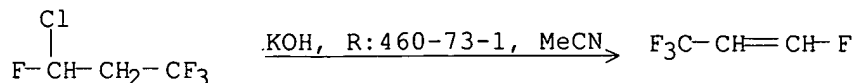
conditions sufficient to dehydrochlorinate 1-chloro-1,3,3,3-tetrafluoropropane and/or to dehydrofluorinate 1,1,1,3,3-pentafluoropropane, forming 1,3,3,3-tetrafluoropropene.

RX(2) OF 5



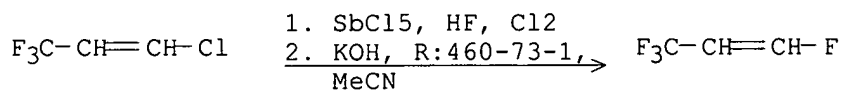
CON: room temperature

RX(3) OF 5



CON: 60 deg C

RX(4) OF 5 - 2 STEPS



NOTE: 1) optimization study, other products also detected

CON: STEP(1) 12 seconds, 70 deg C, 45 psi

STEP(2) 60 deg C

=>

---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

162.33

162.54

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-5.25

-5.25

STN INTERNATIONAL LOGOFF AT 17:31:03 ON 29 SEP 2008

10/626,997

09/29/2008

Part B  
Step 1

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal62lcon

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	12	JUN 25	CA/CAPLUS and USPAT databases updated with IPC reclassification data
NEWS	13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS	15	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS	16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	17	JUL 28	CA/CAPLUS patent coverage enhanced
NEWS	18	JUL 28	EPFULL enhanced with additional legal status information from the EPOLINE Register
NEWS	19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	20	JUL 28	STN Viewer performance improved
NEWS	21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	22	AUG 13	CA/CAPLUS enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	24	AUG 15	CAPLUS currency for Korean patents enhanced
NEWS	25	AUG 25	CA/CAPLUS, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS	26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information
NEWS	27	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
NEWS	28	SEP 25	CA/CAPLUS current-awareness alert options enhanced

10/626,997

09/29/2008

to accommodate supplemental CAS indexing of  
exemplified prophetic substances  
NEWS 29 SEP 26 WPIDS, WPINDEX, and WPIX coverage of Chinese and  
and Korean patents enhanced  
NEWS 30 SEP 29 IFICLS enhanced with new super search field  
NEWS 31 SEP 29 EMBASE and EMBAL enhanced with new search and  
display fields

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that  
specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:16:01 ON 29 SEP 2008

=> FILE CASREACT  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

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26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 28 Sep 2008 VOL 149 ISS 14

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\*  
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\*  
\*\*\*\*\*

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Biotransformations database compiled under the direction of  
Professor Dr. Klaus Kieslich; organic reactions, portions copyright  
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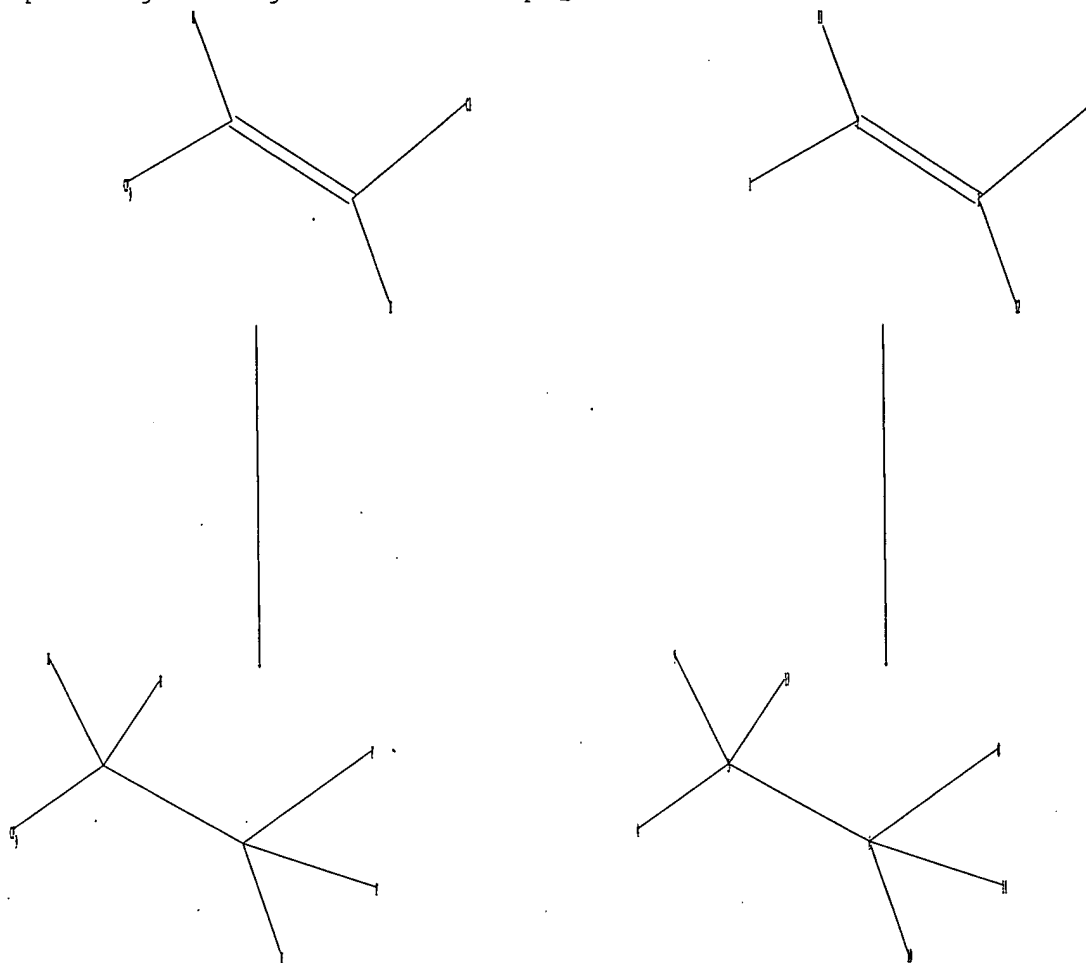
10/626,997

09/29/2008

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

Uploading C:\Program Files\Stnexp\Queries\RS-3A.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

exact bonds :

1-2 2-3 2-11 3-7 3-12 4-5 5-6 5-9 5-13 6-8 6-10 6-14

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS

fragments assigned product role:

containing 4

fragments assigned reactant/reagent role:

containing 1

10/626,997 09/29/2008

L1 STRUCTURE UPLOADED

=> S L1 FULL

FULL SEARCH INITIATED 17:17:21 FILE 'CASREACT'

SCREENING COMPLETE - 5403 REACTIONS TO VERIFY FROM 932 DOCUMENTS.

100.0% DONE 5403 VERIFIED 13 HIT RXNS 12 DOCS

SEARCH TIME: 00.00.01

L2 12 SEA SSS FUL L1 ( 13 REACTIONS)

=> D L2 IBIB ABS CRD 1-12

L2 ANSWER 1 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 147:502007 CASREACT

TITLE: Preparation of 1,1,1,3,3-pentafluoropropane (HFC-245fa) by using a SbF<sub>5</sub>-attached catalyst

AUTHOR(S): Quan, Heng-Dao; Yang, Hui-E.; Tamura, Masanori; Sekiya, Akira

CORPORATE SOURCE: Tsukuba Central 5-2, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan

SOURCE: Journal of Fluorine Chemistry (2007), 128(3), 190-195  
CODEN: JFLCAR; ISSN: 0022-1139

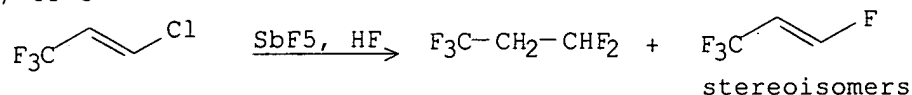
PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The preparation of HFC-245fa by reaction of 1,1,1,3,3-pentachloropropane and anhydrous HF via two-step vapor-phase catalytic fluorination is described. The antimony pentafluoride catalyst was supported on inert porous materials to improve the catalytic activity. The resulting catalyst not only exhibited high catalytic activity and excellent thermal stability, but also improved the performance of SbF<sub>5</sub>, in terms of hygroscopicity and corrosion.

RX(2) OF 3



NOTE: gas phase, solid-supported catalyst, flow system used, optimization study, optimized on catalyst, catalyst support and reaction temperature, porous aluminium fluoride based catalyst at 350 deg C gave higher conversion but much lower selectivity on pentafluoro product, porous magnesium fluoride based catalyst support, tubular Inconel reactor used

CON: STAGE(1) 80 deg C -> 120 deg C; 1.81 seconds, 120 deg C

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 146:208362 CASREACT

TITLE: Fluorination catalysts, method for their preparation, and method for producing fluorinated compounds using the catalysts



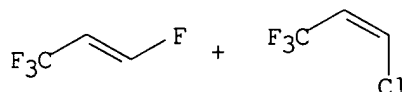
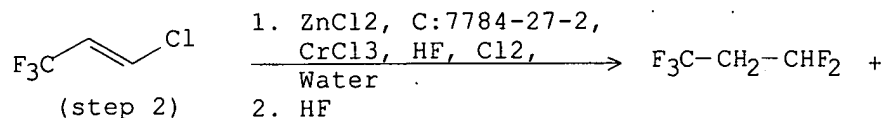
INVENTOR(S): Quan, Heng-Dao; Yang, Huie; Tamura, Masanori; Sekiya, Akira  
 PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan  
 SOURCE: U.S. Pat. Appl. Publ., 10pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070027348	A1	20070201	US 2006-456126	20060707
CN 1911512	A	20070214	CN 2006-10105441	20060705
JP 2007038216	A	20070215	JP 2006-187242	20060706
			JP 2005-199350	20050707

PRIORITY APPLN. INFO.:  
 OTHER SOURCE(S): MARPAT 146:208362

AB The present invention provides a novel fluorination catalyst that has high stability at high temps., is easily regenerated and is superior in catalytic activity and selectivity and a method for the preparation of the fluorination catalyst. The present invention also provides a method for the preparation of a novel fluorinated compound, and particularly, 1,1,1,3,3-pentafluoropropane (HFC-245fa), by using the catalyst. The fluorination catalyst of the present invention is obtained by treating a metal salt containing a chromium salt such as chromium oxide with chlorine gas and/or oxygen gas. Examples of the metal salt may include, besides a chromium salt, one or more catalytically active metal salts selected from magnesium salts, aluminum salts, zinc salts, sodium salts, nickel salts, iron salts, cobalt salts, vanadium salts, manganese salts and copper salts.

RX(1) OF 1



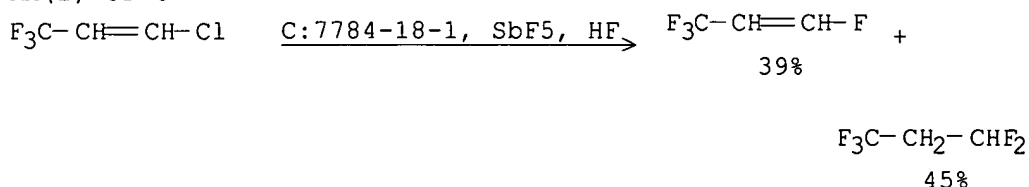
NOTE: Alternative preparations gave similar to lower conversions, gas phase, optimization study, thermal  
 CON: STAGE(1) room temperature; 4 hours, 400 deg C  
 STAGE(2) 150 deg C

L2 ANSWER 3 OF 12 CASREACT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 143:442384 CASREACT  
 TITLE: Investigation into antimony pentafluoride-based catalyst in preparing organo-fluorine compounds  
 AUTHOR(S): Yang, Hui-e; Quan, Heng-dao; Tamura, Masanori; Sekiya, Akira  
 CORPORATE SOURCE: National Institute of Advanced Industrial Science and

SOURCE: Technology (AIST), Tsukuba, Ibaraki, 305-8565, Japan  
Journal of Molecular Catalysis A: Chemical (2005),  
233(1-2), 99-104  
CODEN: JMCCF2; ISSN: 1381-1169  
PUBLISHER: Elsevier B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

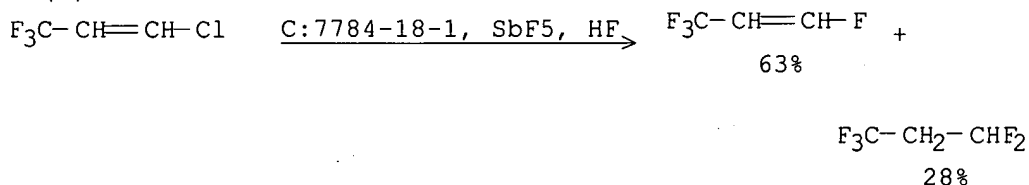
AB Antimony pentafluoride (SbF<sub>5</sub>)/porous metal fluorides (PMF) were prepared by impregnation of PMF with SbCl<sub>5</sub> followed by fluorination with anhydrous hydrogen fluoride (AHF). The PMFs include Al fluoride, Mg fluoride, Ca fluoride, and Cr fluoride, prepared from the corresponding oxides. The SbF<sub>5</sub>/PMF demonstrates excellent activity as catalyst in vapor-phase fluorination of hydrocarbons and overcomes such drawbacks as hygroscopicity, corrosion, and toxicity that appear when SbF<sub>5</sub> is used alone. The SbF<sub>5</sub>/PMF catalyst system was characterized by x-ray diffraction, XPS, BET surface area measurements, and SEM. The catalytic activity was evaluated in vapor-phased fixed-bed fluorination of chlorinated hydrocarbons.

RX(2) OF 6



NOTE: stereoselective, in the vapour-phase  
CON: 1.7 seconds, 303 deg C

RX(3) OF 6



NOTE: stereoselective, in the vapour-phase  
CON: 1.7 seconds, 350 deg C

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 142:158394 CASREACT

TITLE: Two-step process for the manufacture of  
1,3,3,3-tetrafluoropropene from 1-chloro-3,3,3-  
trifluoropropene

INVENTOR(S): Tung, Hsueh Sung; Johnson, Robert C.; Merkel, Daniel  
C.

PATENT ASSIGNEE(S): Honeywell International Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

10/626,997

09/29/2008

FAMILY ACC. NUM. COUNT: 26

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050020862	A1	20050127	US 2003-626997	20030725
WO 2005012212	A2	20050210	WO 2004-US23160	20040721
WO 2005012212	A3	20050331		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1658252	A2	20060524	EP 2004-778595	20040721
R: DE, ES, FR, GB, IT				
CN 1852880	A	20061025	CN 2004-80027096	20040721
JP 2007500127	T	20070111	JP 2006-521162	20040721
US 20070129579	A1	20070607	US 2006-588465	20061027
CA 2608327	A1	20080427	CA 2007-2608327	20071026
CA 2608675	A1	20080427	CA 2007-2608675	20071026
EP 1916231	A2	20080430	EP 2007-119432	20071026
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				
EP 1916232	A1	20080430	EP 2007-119443	20071026
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WO 2008057794	A1	20080515	WO 2007-US82601	20071026
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2008038074	A	20080502	KR 2007-109198	20071029
KR 2008038075	A	20080502	KR 2007-109199	20071029
JP 2008110980	A	20080515	JP 2007-280802	20071029
CN 101182280	A	20080521	CN 2007-10199937	20071029
JP 2008162999	A	20080717	JP 2007-280719	20071029
CN 101260021	A	20080910	CN 2007-10159615	20071029
PRIORITY APPLN. INFO.:				
			US 2003-626997	20030725
			US 2003-694272	20031027
			WO 2004-US23160	20040721
			US 2005-118503	20050429
			US 2005-733355P	20051103
			US 2006-763086P	20060127
			US 2006-588464	20061027

09/29/200829/09/2008

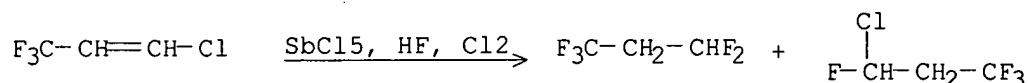
Page 7

US 2006-588465 20061027

US 2006-588671 20061027

AB 1,3,3,3-Tetrafluoropropene is prepared by: (A) reacting 1-chloro-3,3,3-trifluoropropene with hydrogen fluoride in the vapor phase and in the presence of a fluorination catalyst and under conditions sufficient to form an intermediate product comprising 1-chloro-1,3,3,3-tetrafluoropropane and/or 1,1,1,3,3-pentafluoropropane; and (B) reacting the intermediate product with a caustic solution (e.g., aqueous NaOH) and under conditions sufficient to dehydrochlorinate 1-chloro-1,3,3,3-tetrafluoropropane and/or to dehydrofluorinate 1,1,1,3,3-pentafluoropropane, forming 1,3,3,3-tetrafluoropropene.

RX(1) OF 5



NOTE: optimization study, other products also detected  
CON: 12 seconds, 70 deg C, 45 psi

L2 ANSWER 5 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 136:279103 CASREACT

TITLE: Preparation of 1,1,1,3,3-pentafluoropropane

INVENTOR(S): Kaneda, Shozo; Ishihara, Akira; Sakyu, Fuyuhiko; Hibino, Yasuo

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

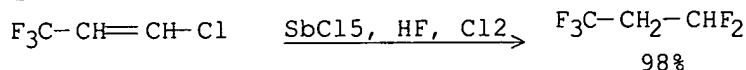
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002105006	A	20020410	JP 2000-298230	20000929
JP 3880300	B2	20070214		

PRIORITY APPLN. INFO.: JP 2000-298230 20000929

AB The compound (I) is prepared by fluorination of 1-chloro-3,3,3-trifluoropropene or 1,3,3,3-tetrafluoropropene with HF in the presence of Cl, wherein fluorination apparatus has a reactor (A) packed with SbCl<sub>5</sub>/C with temperature ≥150° and a reactor (B) packed with SbCl<sub>5</sub>/C with temperature 20-150° in series and reactor A and B are used as the first reactor alternately and repeatedly. 1-Chloro-3,3,3-trifluoropropene was fluorinated with HF in the presence of Cl and SbCl<sub>5</sub>/C at 180° in the first reactor and 80° in the second reactor to give 98.1% I.

RX(1) OF 1



NOTE: gas phase, reactor A at 180.degree. and reactor B at 80.degree.

L2 ANSWER 6 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

10/626,997

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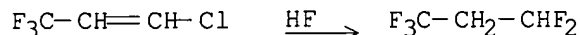
ACCESSION NUMBER: 135:357696 CASREACT  
TITLE: Preparation of 1,1,1,3,3-pentafluoropropane  
INVENTOR(S): Chen, Bin; Elsheikh, Maher Yousef  
PATENT ASSIGNEE(S): ATOFINA Chemicals, Inc., USA  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001316305	A	20011113	JP 2001-104311	20010403
EP 1153906	A1	20011114	EP 2001-301447	20010219
EP 1153906	B1	20030521		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 240919	T	20030615	AT 2001-301447	20010219
ES 2198385	T3	20040201	ES 2001-301447	20010219
CN 1331067	A	20020116	CN 2001-104779	20010221
MX 2001PA02921	A	20020424	MX 2001-PA2921	20010320
PRIORITY APPLN. INFO.:			US 2000-567169	20000508

OTHER SOURCE(S): MARPAT 135:357696

AB Title compound is prepared by hydrofluorination of 1,1,1-trifluoro-3-chloro-2-propene containing <100 ppm CF<sub>3</sub>-aCl<sub>a</sub>CH:CHbCl<sub>2</sub>-b (a = 1-3; b = 0-2) as impurities. 1,1,1-Trifluoro-3-chloro-2-propene containing no impurities are reacted with HF in the presence of a catalyst at 380°. The catalyst showed activity after 400 h.

RX(1) OF 1



NOTE: gas phase, reactant contg. no impurity, no detail for metal catalyst

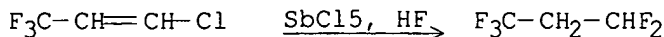
L2 ANSWER 7 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 134:17260 CASREACT  
TITLE: Preparation of 1,1,1,3,3-pentafluoropropane  
INVENTOR(S): Elsheikh, Maher Yousef; Chen, Bin  
PATENT ASSIGNEE(S): Elf Atochem North America, Inc., USA  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000336048	A	20001205	JP 2000-139766	20000512
US 6528691	B1	20030304	US 1999-312267	19990514
CA 2307414	A1	20001114	CA 2000-2307414	20000502
CA 2307414	C	20080722		
MX 2000PA04617	A	20020308	MX 2000-PA4617	20000512
PRIORITY APPLN. INFO.:			US 1999-312267	19990514

AB Title compound (I; 245fa) is prepared by treating 1,1,1-trifluoro-3-chloro-2-propene (II; 1233zd) with HF in the presence of supported Sb halide catalysts in gas phases. II was treated with HF in the presence of SbCl<sub>5</sub>/activated C at 112° and contact time 47 s to give I with 97.7% selectivity at 96.6% conversion.

RX(1) OF 1



NOTE: gas phase

L2 ANSWER 8 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 130:311526 CASREACT

TITLE: Preparation of halogenated propanes from halogenated propenes

INVENTOR(S): Tamai, Ryoichi; Yoshikawa, Satoru; Hibino, Yasuo

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

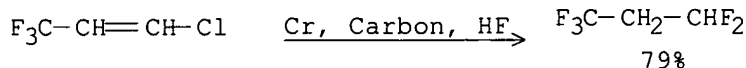
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11106358	A	19990420	JP 1997-270106	19971002
JP 4079482	B2	20080423		

PRIORITY APPLN. INFO.: JP 1997-270106 19971002

OTHER SOURCE(S): MARPAT 130:311526

AB CF<sub>3</sub>-bClbCH<sub>2</sub>CHYZ (Y, Z = F, Cl; b = 0-3), useful as blowing agents, refrigerants, solvents, propellants, etc. (no data), are prepared by reaction of CF<sub>3</sub>-aCl<sub>a</sub>CH:CHX (X = F, Cl; a = 0-3) with HF under pressure in gas phases in the presence of fluorination catalysts. CF<sub>3</sub>CH:CHCl was treated with HF using Cr/activated C at 270° under 0.5 MPa to give 79.4% CF<sub>3</sub>CH<sub>2</sub>CHF<sub>2</sub>.

RX(1) OF 1



L2 ANSWER 9 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 128:217103 CASREACT

TITLE: Preparation of 1,1,1,3,3-pentafluoropropane from 1-chloro-3,3,3-trifluoropropene

INVENTOR(S): Sakyu, Fuyuhiko; Yoshikawa, Satoshi; Hibino, Yasuo

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

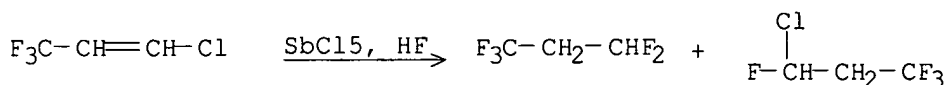
FAMILY ACC. NUM. COUNT: 3

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10072381	A	19980317	JP 1996-226638	19960828
JP 3164288	B2	20010508		
US 6235951	B1	20010522	US 1996-752879	19961120
PRIORITY APPLN. INFO.:			JP 1996-5971	19960117
			JP 1996-222004	19960823
			JP 1996-226638	19960828

AB 1,1,1,3,3-Pentafluoropropane (I), useful as blowing agents or refrigerants (no data), is prepared by catalytic addition reaction of HF to 1-chloro-3,3,3-trifluoropropene (II) and catalytic disproportionation of the resulting 1,1,1,3-tetrafluoro-3-chloropropane (III). II (64.1 g) was treated with HF in the presence of SbCl<sub>5</sub> at 80° under 6 kg/cm<sup>2</sup>G for 3 h to give 37.2 g product containing 57.9% I and 10.7% III.

RX(1) OF 1



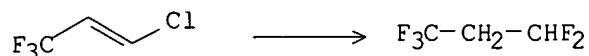
L2 ANSWER 10 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 128:24279 CASREACT  
 TITLE: Preparation of 1-chloro-3,3,3-trifluoropropene and its liquid-phase fluorination into 1,1,1,3,3-pentafluoropropane  
 INVENTOR(S): Lantz, Andre; Requieme, Benoit; Wendlinger, Laurent  
 PATENT ASSIGNEE(S): Elf Atochem S.A., Fr.  
 SOURCE: Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19716337	A1	19971120	DE 1997-19716337	19970420
FR 2748473	A1	19971114	FR 1996-5908	19960513
FR 2748473	B1	19980724		
CA 2203433	A1	19971113	CA 1997-2203433	19970422
ES 2128256	A1	19990501	ES 1997-910	19970428
ES 2128256	B1	20000116		
GB 2313118	A	19971119	GB 1997-9202	19970506
CN 1166479	A	19971203	CN 1997-111593	19970513
JP 10087523	A	19980407	JP 1997-122453	19970513
PRIORITY APPLN. INFO.:			FR 1996-5908	19960513

AB 1,1,1,3,3-Pentafluoropropane, useful as a propellant gas (no data), a foaming agent (no data), and as a cooling agent (no data), is prepared in high yield and selectivity by the catalytic fluorination of 1-chloro-3,3,3-trifluoropropene (I) with anhydrous HF, and I is prepared by the gas-phase, fluorination of 1,1,1,3,3-pentachloropropane.

RX(1) OF 1



NOTE: 50-150.deg., ACID

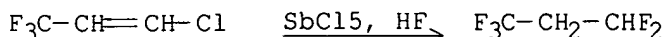
L2 ANSWER 11 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 127:262435 CASREACT  
 TITLE: Preparation of 1,1,1,3,3-pentafluoropropane from  
 1-chloro-3,3,3-trifluoropropene  
 INVENTOR(S): Yoshikawa, Satoru; Tamai, Ryoichi; Saku, Fuyuhiko;  
 Hibino, Yasuo  
 PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09241188	A	19970916	JP 1996-47641	19960305
JP 3183819	B2	20010709		
US 6316681	B1	20011113	US 1996-982803	19961204
US 6198010	B1	20010306	US 1998-166838	19981006
PRIORITY APPLN. INFO.:			JP 1996-47641	19960305
			JP 1996-81557	19960403
			US 1996-982803	19961204

AB F2CHCH2CF3 is prepared by liquid phase fluorination of ClCH:CHCF3 in the presence of Sb catalysts. ClCH:CHCF3 (34.6 g) was autoclaved with HF and SbCl5 at 71° and 10 kg/cm2 for 3 h to give 28.7 g products containing 93.9% F2CHCH2CF3.

RX(1) OF 1



L2 ANSWER 12 OF 12 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 127:95018 CASREACT  
 TITLE: Process for producing 1,1,1,3,3-pentafluoropropane by  
 fluorination of 1,1,1,3,3-pentachloropropane  
 INVENTOR(S): Nakada, Tatsuo; Aoyama, Hirokazu; Yamamoto, Akinori  
 PATENT ASSIGNEE(S): Daikin Industries Ltd., Japan  
 SOURCE: PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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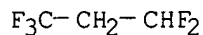
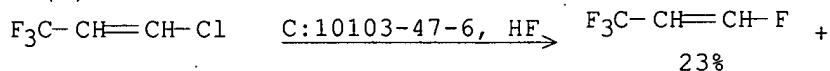


WO 9724307 A1 19970710 WO 1996-JP2942 19961008  
 W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, KE, KG, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN  
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  
 JP 09183740 A 19970715 JP 1995-354118 19951229  
 JP 3818398 B2 20060906  
 CA 2241131 A1 19970710 CA 1996-2241131 19961008  
 CA 2241131 C 20011204  
 AU 9672275 A 19970728 AU 1996-72275 19961008  
 AU 704997 B2 19990513  
 EP 877009 A1 19981111 EP 1996-933611 19961008  
 EP 877009 B1 20020403  
 R: BE, DE, ES, FR, GB, IT, NL  
 CN 1206394 A 19990127 CN 1996-199419 19961008  
 CN 1067043 C 20010613  
 BR 9612297 A 19990713 BR 1996-12297 19961008  
 ES 2174108 T3 20021101 ES 1996-933611 19961008  
 CN 1224410 A 19990728 CN 1997-196154 19970321  
 US 6018084 A 20000125 US 1998-91820 19980625  
 JP 1995-354118 19951229  
 WO 1996-JP2942 19961008

PRIORITY APPLN. INFO.:

AB Characterized is a process for producing 1,1,1,3,3-pentafluoropropane (I) using fluorination catalyst which involves (1) gas-phase reacting 1,1,1,3,3-pentachloropropane with HF to thereby give 1,1,1-trifluoro-3-chloro-2-propene (II); and (2) gas-phase reacting II with HF to thereby give I; wherein II obtained in the first step is fed into the second step after eliminating HCl formed as the byproduct therefrom. Thus, an economical and novel process for producing I, which is an useful as foaming and blowing agents, can be provided in a high yield with a good selectivity.

RX(2) OF 3



52%

NOTE: 250.degree., reactant 4 and 5 at 20 and 200 cc/min feeding speed resp.

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10/626,997

09/29/2008

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

191.00

191.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-9.00

-9.00

STN INTERNATIONAL LOGOFF AT 17:18:17 ON 29 SEP 2008